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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/438,692 | 11/11/1999 | RODNEY C. LANGLEY | 3656US(95-00 | 9759 |

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EXAMINER

POTTER, ROY KARL

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/438,692

Applicant(s)

LANGLEY, RODNEY C.

Examiner

Roy K Potter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 04 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9, 11-19 and 21-30 is/are rejected.
- 7) ☒ Claim(s) 4, 10 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 3, 5 - 7 and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by Ming-Tsung et al..

Ming-Tsung et al., U.S. Patent 5,703,408 discloses, as shown in Figure 7, a bond pad having a substantially flat surface. It is located above insulating layer 30. The surface has openings 32 extending partially into the surface. The openings are disposed about the center that is free of openings. Figure 3 shows a cross section that includes substrate 0 which includes active devices, as explained in column 3, line 10. Figures 5 and 6 show an arrangement of rectangular channels arranged parallel to each other. Figure 7 shows channels which are "L" shaped.

Claims 8 and 17 - 18 and 26 - 30 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 59-35437 to Hayakawa .

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Hayakawa discloses a semiconductor device which comprises an active circuit in a semiconductor device. The circuit is a wiring pattern 11 which overlies it. The wiring pattern 11 has selected areas that form bond pads with a plurality of openings extending partially into a substantially flat surface.

Claims 28 - 30 are product- by process claims. The Applicant should note that such claims are directed to the product per se, regardless of how it is actually made.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 11 - 15, 19, 21 - 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa in view of Ming-Tsung.

Ming-Tsung, described above, has openings about a center portion, in a series of spaced apart rectangular channels arranged parallel to each other, and in "L" shaped channels. Ming-Tsung also teaches the use of a passivation layer 40 shown in figure 3.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the patterns shown y Ming-Tsung because they are taught to reduce bond pad peel-off.

Passivation, as shown by Ming-Tsung, is well known in the art to provide protection form undesired electrical connection to a wiring layer and would have been obvious to one of ordinary skill in the art at the time the invention was made.

Allowable Subject Matter

Claims 4, 10 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

There is no teaching or radiating openings as claimed in claims 4, 10 and 20.

Conclusion

The applicant argues that the subject matter of this reissue application has not already been allowed in U.S. Patent No. 5,686,762.

The Applicant also argues that the claims to a bond pad were omitted in the U.S. Patent No. 5,686,762.


Applicant's arguments with respect to claims 1 - 30 have been considered but are moot in view of the new ground(s) of rejection.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roy Potter whose telephone number is (703) 308 - 4106.

A handwritten signature in black ink, appearing to read 'Roy Potter', with a stylized, cursive script.

Roy Potter
Primary Examiner
Technology Center 2800

Potter
April 7, 2003